

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLN. NO. 09/898,066

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for controlling and supervising an electronic device, comprising one or more peripheral units-units, through an apparatus comprising one or more-at least two controllers, said method comprising the steps of:

controlling each peripheral unit of the device by means of a controller of said one or more at least two controllers;

identifying a plurality of data items which have to be handled in order to carry out control and supervision of the device; and

generating/receiving, through said one or more controllers, messagesgenerating/receiving messages of the same pre-established format, through said controllers, each message containing one or more of said data items to be handled,handled;

wherein the method further comprises the step of connecting said controllers through a common bus,bus; and

interchanging the data items between said at least two controllers through said common bus,

wherein the pre-established format of said messages generated by/received from the controllers is pre-established and substantially independent of the size of data items contained therein.

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2. (original): A method according to claim 1, wherein the step of identifying a plurality of data items which have to be handled comprises the step of arranging all data in storage registers, each register having the same size, each data item being univocally identified by an identifier of a register containing it and by an identifier that identifies a position of the data item inside the register itself.

3. (original): A method according to claim 2, wherein it further comprises the step of identifying a subset of data arranged in registers, said data subset being composed of one or more registers and corresponding to data for control/supervision of a partially equipped device.

4. (currently amended): A method according to claim 1, wherein it further comprises the steps of:

providing a concentrator ~~or supervision entity, said concentrator being connected to said~~ one or more controllers by said common bus; and

providing said concentrator with information concerning said data items and their arrangement in registers.

5. (currently amended): A method according to claim 4, wherein the step of providing said concentrator with information ~~e~~concerning data comprises the steps of defining use relations between each of said data item~~s~~ items and at least one ~~e~~controller, ~~and controller~~ specifying an information flow ~~direction, namely direction relative to~~ a supervision entity producing or using said data item.

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6. (currently amended): A method according to claim 5, wherein each controller validates only a pre-established part of a message, in accordance with the corresponding use relation.
7. (original): A method according to claim 1, wherein it further comprises a step of providing each of the controllers with a computer software program, said software program comprising: a first control module, which is the same for all the controllers and independent of the handled data; a second processing module for each single data item and which is usable in any controller that handles such a data item; and a platform module which is the same for all the hardware of the same type, capable of driving the peripheral units.
8. (original): A method according to claim 1, wherein it further comprises a step of disconnecting said concentrator once a start up step is finished.
9. (previously presented): A method according to claim 1, wherein said device is a device for receiving, transmitting and processing signals in radio relay systems.
10. (currently amended): An apparatus for controlling and supervising, through the handling of a plurality of data items, an electronic device, the device comprising one or more peripheral units, the apparatus comprising:
~~one or more~~ at least two controllers, each peripheral unit being controlled through a controller; and
means for generating/receiving, through said controllers, messages of the same pre-established format, each message containing one or more of said data items to be handled,

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wherein it further comprises a common bus ~~for~~-connecting said controllers ~~together, to~~
each other, said bus providing interchange of data items between said controllers, and

wherein the same pre-established format of said messages generated/received by the
controllers is ~~pre-established and substantially independent of the size of data~~ items contained
therein.

11. (currently amended): An apparatus according to claim 10, wherein it further
comprises storage registers for storing therein the data items to be handled, each register having
the same size, each data item being univocally identified by an ~~identifier~~ identifier of the register
containing it and by an interval identifying the position of the data item inside the register itself.

12. (currently amended): An apparatus according to claim 10, wherein it further
comprises a concentrator ~~or supervision entity~~ connected to the controllers via a common bus,
said concentrator receiving information concerning said data items and their arrangement in
registers.

13. (currently amended): An apparatus according to claim 10, wherein each controller
comprises a computer software program, said software program comprising: a first control
module, with the first module being the same for all the controllers and unrelated to the handled
data; a second processing module for each ~~single~~ of said data ~~item~~ items and which is usable in
any controller handling such a data item; and a platform module, with said platform module
being the same for hardware of the same type, capable of driving the peripheral units.

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14. (original): An apparatus according to claim 10, wherein said device to be controlled/supervised is a device for receiving/transmitting and processing signals in radio relay systems.

15. (currently amended): A computer software program comprising program code means designed to carry out ~~one or more~~ of the steps of claim 1 when said program is run on a computer.

16. (currently amended): A computer-readable medium having a computer software program recorded thereon, said computer-readable medium comprising program code means designed to carry out ~~one or more~~ of the steps of claim 1 when said program is run on a computer.

17. (new): A method for controlling and supervising an electronic device, comprising one or more peripheral units, through an apparatus comprising at least two controllers, said method comprising the steps of:

controlling each peripheral unit of the device by means of a controller of said at least two controllers;

identifying a plurality of data items which have to be handled in order to carry out control and supervision of the device;

generating/receiving messages of a pre-established format through said controllers, each message containing one or more of said data items to be handled; and

connecting said controllers through a common bus;

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wherein the pre-established format of said messages generated by/received from the controllers is substantially independent of the size of data items contained therein;

wherein it further comprises the steps of:

providing a concentrator connected to said one or more controllers by said common bus;
and

providing said concentrator with information concerning said data items and their arrangement in registers;

wherein the step of providing said concentrator with information comprises the steps of defining use relations between each of said data items and at least one controller specifying an information flow direction relative to a supervision entity producing or using said data item.

wherein each controller validates only a pre-established part of a message, in accordance with the corresponding use relation.